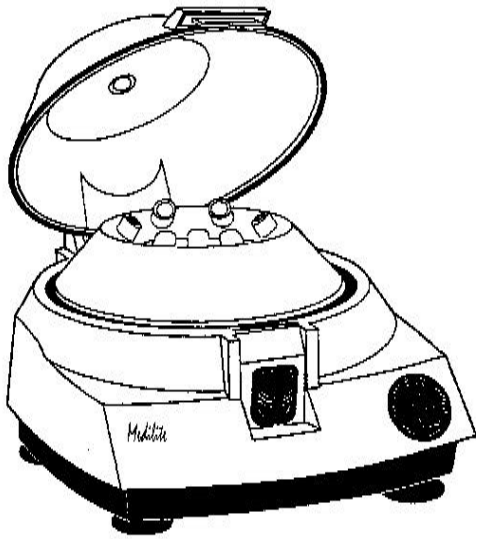
OPERATION MANUAL

IM-448

Revision 1



Medilite 6 Place

Ventilated Centrifuge
Cat. No. 448 – For 120 VAC, 50/60 Hz
Cat. No. 449 – For 220/240 VAC, 50/60 Hz

Medilite 12 Place

Ventilated Centrifuge
Cat. No. 458 – For 120 VAC, 50/60 Hz
Cat. No. 459 – For 220/240 VAC, 50/60 Hz

SIMPLIFIED OPERATION INSTRUCTIONS

GENERAL

The Thermo IEC Medilite is a portable benchtop centrifuge designed for use in the physician's office, the small clinical laboratory, and in the educational field, to perform separations by centrifugal force, and not for any other purpose.
Note: Typical sound level emissions do not exceed 70 dB(A)

INSTALLATION

The location of the centrifuge must be clean and dry to allow the suction cup feet to properly and safely secure the centrifuge. The location must be level and rigid to provide quiet and vibration free performance. International Electrotechnical Commission standard 1010 part 2-20 limits permitted movement of a centrifuge to 300mm in the event of a disruption. Therefore, mark this clearance envelope boundary around the centrifuge. Laboratory procedures should require that no person or any hazardous materials are within this boundary during operation of the centrifuge.

Plug the unit into a 120 VAC ± 10%, 50/60 Hz (Cat. No.s 448 & 458) or a 220/240 VAC ± 10%, 50/60 Hz (Cat No.s 449 & 459) grounded receptacle.

OPERATION

To open the cover, press the black latch button upward, and lift the cover. *The rotor is installed* by orienting it on the shaft and pressing down on its center hub. Close the cover securely, ensuring that the latch is fully engaged. *To start a run*, turn the timer knob to the desired run duration. (For runs of less than five minutes, turn the timer past the five (5) minute setting and then back to the desired run duration.) For runs of infinite duration, turn the timer knob to the '∞' setting. The motor will take several seconds to reach top speed.

A run is stopped by either turning the timer knob to the zero (0) setting or by allowing the time to expire. Wait until the rotor has stopped before opening the cover.

SAFETY

Below are listed *warnings* against operating procedures which could result in an accident and/or personal injury. Also listed are *cautions* against procedures which could result in damage to your centrifuge or accessory equipment.

Warnings:

- Plug the power cord into a grounded outlet.
- Never remove the grounding prong from the power plug, or use any adapter which does not complete the grounding circuit.
- Always unplug the power cord before attempting to clean or service the centrifuge.
- Do not spin fluids having a specific gravity greater than 1.5.
- Do not operate the centrifuge if the shields or rotor show signs of damage. If deterioration is visible, replace the affected parts immediately.
- Load the rotor SYMMETRICALLY with 2,3,4 or 6 tubes in the six-place rotor (NOT 1 or 5); or 2,3,4,6,8,9,10 or 12 tubes in the twelve-place rotor (NOT 1, 5, 7 or 11). The tubes must be of equal size and with contents of equal (to within 1 gram) weight.

Cautions:

- The Thermo IEC Medilite is not intended or recommended for use with chemical solvents that may weaken critical parts. Refrain from using prohibited chemicals (see Table 1) for cleaning and/or centrifugation.

WARRANTY & SERVICE

For warranty information, or to obtain service, contact your local Thermo IEC authorized distibutor.

VEREINFACHTE BEDIENUNGSANLEITUNG

ALLGEMEINES

Die Medilite von Thermo IEC ist eine tragbare Zentrifuge für den Labortisch, zum Gebrauch im Labor eines Arztes, in einem kleinen klinischen Laboratorium oder im erzieherischen Feld, um Trennungen durch eine zentrifugale Kraft durch- zuführen und nicht für irgend einen anderen Zweck.
Anmerkung: Typische Geräuschpegel überschreiten nicht 70 dB(A)

INSTALLATION

Der Aufstellungsplatz der Zentrifuge muß sauber und trocken sein und den mit einer Haftschale versehenen Füßen erlauben, die Zentrifuge richtig und sicher festzuhalten. Der Platz muß eben und fest sein um geräuscharme und vibrationsfreie Arbeit zu erlauben. Standard 1010 Teil 2-20 der "International Electrotechnical Commission" erlaubte die Bewegung einer Zentrifuge im Falle einer Unterbrechung bis zu 300 mm. Deshalb sollten Sie diese Abstandsumhüllungsbegrenzung um die Zentrifuge herum markieren. Laborvorschriften sollten sicherstellen daß sich keine Person oder gefährliches Material während des Betriebes der Zentrifuge innerhalb dieser Begrenzung befinden.

Stecken Sie das Gerät in eine 120 VAC ± 10%, 50/60 Hz (Kat. Nr. 448 & 458) oder in eine 220/240 VAC ± 10%, 50/60 Hz (Kat. Nr. 449 & 459) geerdete Steckdose.

BETRIEB

Um die Abdeckung zu öffnen drücken Sie den schwarzen Verriegelungsknopf nach oben und heben die Abdeckung ab. *Der Rotor wird installiert* indem man ihn am Schaft einrichtet und seine Mittelnabe hinunterdrückt. Schließen Sie die Abdeckung sorgfältig, wobei Sie sicher sind, daß die Verriegelung voll einschnappt. *Um einen Arbeitsgang zu beginnen* stellen Sie den Stoppuhrknopf auf die gewünschte Zeitdauer. (Für Arbeitsgänge von weniger als fünf Minuten drehen Sie die Stoppuhr über die fünf (5) Minuten Einstellung hinaus und dann zurück auf die gewünschte Dauer des Arbeitsganges.) Für Arbeitsgänge von unendlicher Dauer stellen Sie den Stoppuhrknopf auf die '∞'-Einstellung. Der Motor braucht mehrere Sekunden um Höchstgeschwindigkeit zu erreichen.

Ein Arbeitsgang wird gestoppt indem man entweder den Stoppuhrknopf auf Null (0) stellt oder indem man die Zeit ablaufen läßt. Warten Sie, bis der Rotor gestoppt hat, bevor er die Abdeckung öffnete.

SICHERHEIT

Untenstehend sind Warnungen gegen Bedienungsmethoden aufgelistet, die in einem Unfall und/oder einer Körperverletzung resultieren könnten. Ebenso aufgelistet sind Vorsichtsmaßnahmen gegen Methoden die Schaden an Ihrer Zentrifuge oder Zubehörgeräten hervorrufen könnten.

Warnungen:

- Das Netzkabel in eine geerdete Steckdose stecken.
- Niemals die Erdung vom Netzstecker entfernen, und nie irgend einen Adapter verwenden der den Stromkreis zur Erde nicht vervollständigt.
- Immer das Netzkabel herausziehen bevor Sie versuchen die Zentrifuge zu reinigen oder zu reparieren.
- Keine Flüssigkeiten zentrifugieren die ein spezifisches Gewicht größer als 1,5 haben.
- Die Zentrifuge nicht benutzen wenn die Schutzschilder oder der Rotor Zeichen von Beschädigung zeigen. Falls Schaden sichtbar ist, die betreffenden Teile sofort ersetzen.
- Den Rotor SYMMETRISCH mit 2, 3, 4 oder 6 Röhrchen im Rotor mit Platz für 6 Röhrchen (NICHT mit 1 oder 5) belasten; oder mit 2, 3, 4, 6, 8, 9, 10 oder 12 Röhrchen im Rotor mit Platz für 12 Röhrchen (NICHT mit 1, 5, 7 oder 11). Die Röhrchen müssen von gleicher Größe mit Inhalt von (innerhalb eines Gramms) gleichem Gewicht sein.

Vorsichtsmaßnahmen:

- Die Thermo IEC Medilite ist nicht geeignet oder wird empfohlen für den Gebrauch mit chemischen Lösungsmitteln, die kritische Teile schwächen könnten. Unterlassen Sie es verbotene Chemikalien (siehe Tabelle 1) zum Reinigen und/oder Zentrifugieren zu verwenden.

GARANTIE UND SERVICE

Für Information über die Garantie oder um Wartung zu erhalten setzen Sie sich bitte mit Ihrem bevollmächtigten örtlichen Thermo IEC-Großhändler in Verbindung.

INSTRUCTIONS SIMPLIFIEES DE FONCTIONNEMENT

GENERALITES

La Medilite d'Thermo IEC est une centrifugeuse portative de bureau conçue pour l'utilisation dans les bureaux de médecin, les petits laboratoires cliniques, et dans les applications d'éducation, pour effectuer la séparation par force centrifuge. Elle n'est pas utilisable pour tout autre emploi.
Note : Les niveaux sonores typiques ne dépassent pas 70 dB(A)

INSTALLATION

La centrifugeuse doit être placée dans un endroit propre et sec pour permettre aux pieds à ventouse d'immobiliser correctement et en toute sécurité la centrifugeuse. L'emplacement doit être renforcé et de niveau pour permettre d'obtenir un fonctionnement sans bruit et sans vibration. La norme 1010, partie 2-20, de la Commission Electrotechnique Internationale limite les déplacements permis de centrifugeuse à 300 mm en cas de mauvais fonctionnement. Par conséquent, il faut marquer les limites de cette enveloppe autour de la centrifugeuse. Les procédures de laboratoire doivent exiger qu'aucune personne et aucun matériau dangereux ne soit présent à l'intérieur de ces limites pendant le fonctionnement de la centrifugeuse.

Branchez l'appareil sur une prise mise à la terre de 120 VAC ± 10%, 50/60 Hz (No. de cat. 448 et 458) ou de 220/240 VAC ± 10%, 50/60 Hz (No. de cat. 449 et 459).

FONCTIONNEMENT

Pour ouvrir le couvercle, poussez le bouton noir de fermeture vers le haut, et soulevez le couvercle. *Le rotor est mis en place* en l'orientant convenablement sur l'arbre et en poussant le moyeu central vers le bas. Refermez avec soin le couvercle, en vous assurant que le verrou soit complètement engagé. *Pour commencer une opération*, faites tourner le bouton de minuterie pour indiquer la durée désirée de l'opération. (Pour les opérations de moins de cinq minutes, faites tourner le bouton de minuterie au-delà du réglage de cinq (5) minutes, puis tournez-le en sens inverse pour indiquer le temps désiré.) Pour les opérations de durée infiniment grande, faites tourner le bouton de minuterie pour indiquer le réglage (∞). Le moteur met plusieurs secondes à atteindre sa vitesse maximale.

Une opération est arrêtée soit en ramenant le bouton de minuterie sur zéro (0), soit en en attendant que la durée de réglage soit atteinte. Attendez jusqu'à ce que le rotor se soit arrêté avant d'ouvrir la couverture.

SECURITE

Des *avertissements* concernant les procédures de fonctionnement qui pourraient causer des accidents et/ou des victimes sont fournis ci-dessous. Des *précautions* concernant les procédures qui pourraient endommager la centrifugeuse ou l'équipement associé sont aussi fournies.

Précautions :

- Branchez le câble d'alimentation sur une prise de secteur mise à la terre.
- Ne jamais retirer la fiche de terre de la prise de secteur, et ne jamais utiliser d'adaptateur qui ne complèterait pas, la mise à la terre de l'alimentation.
- Débranchez toujours le câble d'alimentation avant d'essayer de nettoyer ou de réparer la centrifugeuse.
- Ne faites pas tourner de fluide ayant une densité de plus de 1,5.
- Ne faites par marcher la centrifugeuse si les gardes ou le rotor sont endommagés. Si leur détérioration est visible, remplacez immédiatement les pièces affectées.
- Chargez le rotor SYMMETRIQUEMENT, avec 2, 3, 4 ou 6 tubes pour le rotor à six places (PAS 1 ou 5 tubes) ; ou 2, 3, 4, 6, 8, 9, 10 ou 12 tubes pour le rotor à douze places (PAS 1, 5, 7 ou 11 tubes). Les tubes doivent avoir la même taille et leur contenu doivent avoir le même poids (au gramme près).

Avertissements :

- La Medilite d'Thermo IEC n'a pas été conçue et n'est pas recommandée pour son utilisation avec les solvants chimiques qui peuvent détériorer les pièces critiques. Ne pas utiliser les produits chimiques interdits (voir le Tableau 1) pour le nettoyage et/ou la centrifugation.

GARANTIE ET SERVICE

Pour des informations concernant la garantie, ou pour effectuer des réparations, veuillez contacter votre distributeur local autorisé Thermo IEC.

INSTRUCCIONES SIMPLIFICADAS DE OPERACIÓN

GENERALIDADES

La unidad Thermo IEC Medilite es una centrífuga portátil tipo mostrador para usarse en el consultorio médico, laboratorio clínico pequeño y en el campo educacional, para realizar separaciones de rutina vía fuerza centrífuga, y no con ningún otro fin.

Nota: Las emisiones de niveles de sonido típicas no exceden los 70 dB(A)

INSTALACIÓN

El lugar de instalación de la centrífuga debe ser limpio y seco para permitir que las patas tipo ventosa sujeten en forma correcta y segura a la centrífuga. El lugar de instalación debe estar nivelado y rígido para proporcionar una operación silenciosa y sin vibración. La norma 1010 parte 2-20 de la Comisión Electrotécnica Internacional limita el movimiento permitido de una centrífuga a 300 mm en el caso de una interrupción. Por lo tanto, marque este límite de área de espaciamiento alrededor de la centrífuga. Los procedimientos de laboratorio deben requerir que no haya ninguna persona ni materiales peligrosos dentro de este límite durante el funcionamiento de la centrífuga.

Enchufe la unidad a un receptáculo conectado a tierra de 120 VCA ± 10%, 50/60 Hz (No. de catálogo 448 y 458) ó de 220/240 VCA ± 10%, 50/60 Hz (No. de catálogo 449 y 459).

OPERACIÓN

Para abrir la tapa, empuje el botón de retén negro hacia arriba y levante la tapa. *El rodete se instala* orientándolo sobre el eje y oprimiendo su cubo central hacia abajo. Cierre bien la tapa, asegurándose de que el retén esté totalmente enganchado. *Para iniciar la operación*, gire la perilla del cronómetro a la duración de operación deseada. (Para operaciones de menos de cinco minutos, gire el cronómetro pasando la posición de cinco (5) minutos y luego retrocediendo a la duración de operación deseada.) Para operaciones de duración infinita, gire la perilla del cronómetro a la posición '∞'. El motor se demorará varios segundos en alcanzar la velocidad máxima.

La operación se detiene girando la perilla del cronónetro a la posición cero (0) o permitiendo que transcurra el tiempo. Espere hasta que el rotor ha parado antes de abrir la cubierta.

SEGURIDAD

Abajo se presentan *advertencias* contra procedimientos de operación que podrían producir un accidente y/o lesiones personales. También se presentan *precauciones* contra procedimientos que podrían dañar la centrífuga o equipos auxiliares.

Advertencias:

- Enchufe el cordón de alimentación a un receptáculo conectado a tierra.
- Nunca quite la clavija de conexión a tierra del enchufe, ni utilice un adaptador que no complete el circuito de conexión a tierra.
- Siempre desenchufe el cordón de alimentación antes de intentar limpiar o dar servicio a la centrífuga.
- No centrifuge fluidos que tengan un peso específico superior a 1,5.
- No opere la centrífuga si las protecciones o el rodete muestran señales de daños. Si el deterioro es visible, reemplace las piezas afectadas de inmediato.
- Cargue el rotor en forma SIMÉTRICA con 2, 3, 4 ó 6 tubos en el rodete de seis posiciones (NO 1 ó 5); ó 2, 3, 4, 6, 8, 9, 10 ó 12 tubos en el rodete de 12 posiciones (NO 1, 5, 7 u 11). Los tubos deben ser del mismo tamaño y con contenido de igual peso (dentro de 1 gramo).

Precauciones:

- La unidad Thermo IEC Medilite no está diseñada ni se recomienda para usarse con solventes químicos que pudiesen debilitar las piezas críticas. Evite usar productos químicos prohibidos (ver la Tabla 1) para limpiar y/o centrifugar.

GARANTÍA Y SERVICIO

Para información con respecto a la garantía, o para obtener servicio, comuníquese con el distribuidor local autorizado de Thermo IEC.

ISTRUZIONI SEMPLIFICATE PER L'USO

INTRODUZIONE

La Thermo IEC Medilite è una centrifuga portatile da banco, progettata per essere usata negli ambulatori dei medici, nei piccoli laboratori clinici ed a fini didattici, al fine di eseguire separazioni tramite forza centrifuga e per nessun altro scopo. Nota: il livello tipico di emissione acustica non supera i 70 dB(A).

INSTALLAZIONE

La centrifuga va posta su una superficie pulita ed asciutta per permettere ai piedini a ventosa di aderire in modo appropriato e sicuro, bloccando l'unità. La superficie di appoggio deve essere piana e rigida per consentire alla centrifuga di funzionare in modo silenzioso e privo di vibrazioni. Lo standard 1010, parte 2-20 della Commissione Elettrotecnica Internazionale limita a 300 mm i movimenti permessi ad una centrifuga in caso di rottura. Di conseguenza, contrassegnare questo perimetro di sicurezza attorno all'unità. Le procedure di laboratorio dovrebbero vietare la presenza di persone e di qualsiasi materiale pericoloso all'interno di tale perimetro mentre la centrifuga è in funzione.

Alimentare l'unità inserendo la presa del cavo di alimentazione in una presa di rete collegata a massa da 120 V CA ±10%, 50/60 Hz (No. di cat. 448 e 458) o a 220/240 V CA ±10%, 50/60 Hz (No. di cat. 449 e 459).

FUNZIONAMENTO

Per aprire il coperchio, premere verso l'alto il pulsante nero di bloccaggio e sollevare il coperchio stesso. *Il rotore viene installato* orientandolo sull'albero e premendone verso il basso il mozzo centrale. Chiudere saldamente il coperchio, accertandosi che la chiusura sia completamente innestata. *Per mettere in funzione la centrifuga*, ruotare la manopola del timer, impostando la durata desiderata di centrifugazione. (Nel caso di centrifugazioni la cui durata sia inferiore a cinque minuti, ruotare il timer al di là dell'impostazione da cinque (5) minuti e poi all'indietro, riportandolo sull'impostazione desiderata). Ne caso di centrifugazioni di durata infinita, ruotare la manopola del timer sulla posizione "∞". Il motore raggiunge la massima velocità nel giro di alcuni secondi.

La centrifugazione viene arrestata sia riportando la manopola del timer sulla posizione zero (0) che attendendo lo scadere le tempo impostato. Attendere fino a che il rotore non si sia arrestato prima dell' apertura della copertura.

SICUREZZA

Sono elencate sotto le *avvertenze* relative alle procedure operative che possono causare un incidente o lesioni personali. Sono anche elencate le *precauzioni* relative alle procedure che possono provocare il danneggiamento della centrifuga o delle attrezzature accessorie.

Avvertenze

- Inserire la spina del cavo di alimentazione in una presa collegata a massa.
- Non rimuovere mai il polo di massa dalla spina del cavo di alimentazione, né usare un adattatore che interrompa il circuito di massa.
- Disinserire sempre la spina del cavo di alimentazione dalla presa di rete prima di pulire o effettuare la manutenzione della centrifuga.
- Non far ruotare fluidi aventi un peso specifico superiore a 1,5.
- Non mettere in funzione la centrifuga se le protezioni o il rotore presentano segni di danni. Se ne risulta visibile il deterioramento, sostituire immediatamente il pezzo usurato.
- Caricare il rotore in modo SIMMETRICO con 2, 3, 4 o 6 provette nel rotore a sei posti (NON con 1 o 5 provette), oppure con 2, 3, 4, 6, 8, 9, 10 o 12 provette nel rotore a 12 posti (NON con 1, 5, 7 o 11 provette). Le provette devono avere identiche dimensioni e contenuti dello stesso peso (non più di 1 grammo).

Precauzioni

- La Thermo IEC Medilite non è stata studiata per essere usata con solventi chimici che possano indebolire componenti cruciali e se ne consiglia l'uso a questo fine. Evitare di usare materiali chimici proibiti (vedere la Tabella 1) per la pulizia e/o la centrifugazione.

GARANZIA ED ASSISTENZA

Per informazioni sulla garanzia e per ottenere interventi di servizio, mettersi in contatto con il distributore autorizzato Thermo IEC locale.

VEREENVOUDIGDE BEDIENINGSHANDLEIDING

ALGEMEEN

De Thermo IEC Medilite is een draagbare tafelcentrifuge ontwikkeld voor gebruik in de artsenpraktijk, het kleine klinische laboratorium en in het onderwijs voor het uitvoeren van separaties op basis van centrifugaalkracht en voor geen enkel ander doel.
Opmerking: Karakteristieke geluidsemissieniveaus zijn lager dan 70 dB(A)

INSTALLATIE

De plaats voor de centrifuge dient schoon en droog te zijn zodat de centrifuge goed en veilig met de zuignappen aan het voetstuk vast kan worden gezet. De plaats moet waterpas en stevig zijn om een geluidsarme en trilvrije werking te verzekeren. Norm 1010 deel 2-20 van de Internationale Commisie voor Elektrotechniek beperkt de toegestane verplaatsing van een centrifuge in geval van een storing tot 300 mm. Om deze reden dient de begrenzing van de vrije ruimte rond de centrifuge afgebakend te worden. Laboratoriumvoorschriften dienen te vereisen dat, wanneer de centrifuge in gebruik is, zich binnen deze grenzen geen personen of gevaarlijke stoffen mogen bevinden.

Sluit het apparaat aan op een geaard stopkontakt met 120 VAC (volt wisselstroom) ± 10%, 50/60 Hz (Cat. nrs. 448 & 458) of 220/240 VAC ± 10%, 50/60 Hz (Cat. nrs. 449 & 459).

BEDIENING

Druk, om het deksel te openen, de zwarte knop van het veerslot naar boven en hef het deksel omhoog. *De rotor wordt geïnstalleerd* door hem midden boven de drijfas te plaatsen en de naaf in het centrum omlaag te drukken. Doe het deksel goed dicht en zorg ervoor dat de veerknop stevig vastklikt. Om een run te starten dient de tijdknop op de gewenste centrifugeerduur te worden gezet. (Voor runs van minder dan vijf minuten dient de timer voorbij de vijfminutenstand (5) te worden gedraaid en vervolgens teruggezet te worden op de gewenste duur). Voor runs van onbeperkte duur dient de timerknop op de "∞"-stand te worden gezet. Het kost de rotor een aantal seconden om de topsnelheid te bereiken.

Een run wordt beëindigd door óf de timerknop op nul (0) te zetten, óf door de tijd te laten verlopen. Wachten voor naar de rotor heeft zwijgen vooraleer opening naar de omslag.

VEILIGHEID

Hieronder volgt een lijst *waarschuwingen* tegen werkwijzen die ongelukken en/of lichamelijk letsel kunnen veroorzaken. Er is tevens een lijst met punten waarop *gelet* moet worden om handelingen te voorkomen die kunnen leiden tot schade aan de centrifuge of bijbehorende apparatuur.

Waarschuwingen:

- Steek de stekker in een geaard stopkontakt.
- Verwijder nooit de aarde-pen van de stekker, of gebruik een adapter die het aardingscircuit niet voltooit.
- Voorafgaand aan schoonmaken of onderhoud aan de centrifuge dient altijd de stekker uit het stopkontakt te worden verwijderd.
- Centrifugeer geen vloeistoffen met een soortelijk gewicht hoger dan 1,5.
- De centrifuge dient niet te worden gebruikt wanneer de hulzen voor de reageerbuizen of de rotor tekenen van schade vertonen. Bij zichtbare slijtage dienen de betroffen onderdelen direkt te worden vervangen.
- De centrifuge dient SYMMETRISCH te worden geladen met 2, 3, 4 of 6 buizen in de rotor met zes plaatsen (NIET 1 of 5); of met 2, 3, 4, 6, 8, 9, 10, of 12 buizen in de rotor met twaalf plaatsen (NIET 1, 5, 7 of 11). De buizen dienen hetzelfde formaat en een gelijke inhoud (minder dan 1 gram gewichtsverschil) te hebben.

Let op:

- De Medilite is niet bedoeld of aanbevolen voor gebruik met chemische oplosmiddelen die belangrijke onderdelen zouden kunnen aantasten. Verboden chemikaliën (zie tabel 1) dienen niet voor schoonmaken en/of bij centrifugering te worden gebruikt.

GARANTIE EN SERVICE

Neem voor garantie-informatie of voor het verkrijgen van service contact op met de lokale erkende Thermo IEC-leverancier.

INSTRUÇÕES OPERACIONAIS SIMPLIFICADAS

GERAL

A Medilite Thermo IEC é uma centrífuga de topo de mesa, portátil, projetada para uso no consultório do médico, no laboratório de análises clínicas pequeno, e no campo educacional, para fazer separações por força centrífuga, e não para qualquer outra finalidade.
Observação: As emissões de nível sonoro típicas não excedem 70 dB(A).

INSTALAÇÃO

O lugar da centrífuga deve estar limpo e seco para permitir que os pés com copo de sucção fixem a centrífuga de maneira adequada e segura. O lugar deve estar nivelado e deve ser rígido para proporcionar um desempenho silencioso e livre de vibrações. O item 2-20 da Norma 1010 da International Electrotechnical Commission limita o movimento permitido de uma centrífuga a 300 mm no caso de um transtorno. Portanto, marque a borda destes limites de espaço ao redor da centrífuga. Procedimentos de laboratório devem requerer que nenhuma pessoa ou quaisquer materiais perigosos se encontrem dentro desses limites durante a operação da centrifuga.

Ligue a unidade a uma tomada aterrada de 120 VCA ±10%, 60 Hz (Números de Catálogo 462 e 464) ou 240 VCA ±10%, 50 Hz (Números de Catálogo 463 e 465).

OPERAÇÃO

Para abrir a tampa, aperte o botão preto do fecho para cima, e levante a tampa. *O rotor é instalado* orientando-o sobre o eixo e apertando-o para baixo pelo centro. Feche a tampa de maneira segura, assegurando-se que o fecho esteja totalmente travado. *Para iniciar a operação*, gire o botão do timer para a duração de operação desejada. (Para operações de menos de cinco minutos, gire o timer para além do ajuste de cinco (5) minutos e depois volte para a duração de operação desejada.) Para operações de duração infinita, gire o botão do timer para a posição '∞'. O motor levará alguns segundos para atingir a velocidade máxima.

Uma operação é parada ao girar o botão do timer para zero (0) ou ao deixar que o tempo termine. Espere até que o rotor pare antes de abrir a tampa.

SEGURANÇA

Abaixo estão relacionados *avisos* contra procedimentos de operações que poderiam resultar em acidentes e/ou lesões pessoais. Também estão relacionados *cuidados* contra procedimentos que poderiam resultar em danos à sua centrífuga ou ao equipamento acessório.

Avisos:

- Ligue o cordão de força a uma tomada aterrada.
- Nunca remova o pino de aterramento do plugue do cordão, e nunca use um adaptador que não complete o circuito de aterramento.
- Desligue sempre o cordão de força antes de tentar limpar ou fazer manutenção da centrífuga.
- Não centrifugue líquidos com peso específico maior que 1.5.
- Não opere a centrífuga se as blindagens ou o rotor aparentam terem sido danificados. Se for visível deterioração, substitua imediatamente as peças afetadas.
- Carregue o rotor SIMETRICAMENTE com 2, 3, 4 ou 6 tubos no rotor de 6 lugares (NÃO 1 ou 5); ou 2, 3, 4, 6, 8, 9, 10 ou 12 tubos no rotor de 12 lugares (NÃO 1, 5, 7 ou 11). Os tubos devem ser do mesmo tamanho com conteúdos de pesos iguais (dentro de 1 grama).

Cuidados:

- O Medilite Thermo IEC não tem a finalidade nem é recomendado para ser usado com solventes químicos que poderiam enfraquecer partes críticas. Não use produtos químicos proibidos (veja a Tabela 1) para limpeza e/ou centrifugação.

GARANTIA E MANUTENÇÃO

Para informações sobre a garantia, ou para obter os serviços de manutenção, contate o seu distribuidor autorizado Thermo IEC.

FORENKLEDE BETJENINGSINSTRUKTIONER

GENERELT

Thermo IEC Medilite er en bærbar centrifuge, som er designet til brug i en lægepraksis, et mindre, klinisk laboratorie, og på undervisningsfeltet til at udføre adskillelser ved centrifugalkraft. Den er ikke beregnet til noget som helst andet formål.

Bemærk: Det typiske niveau for lydafgivelser overstiger ikke 70 dB(A).

INSTALLERING

Centrifugen skal anbringes på et sted, som er rent og tørt, så at sugekopperne på fødderne kan fungere rigtigt, og de kan komme til at holde centrifugen godt og sikkert fast. Dette sted skal have en jævn, hård overflade for at yde en stilfærdig og vibrationsfri præstation. Den internationale, elektrotekniske kommissions standard (International Electrotechnical Commission standard) 1010, afsnit 2-20 begrænser den tilladte bevægelse af en centrifuge til 300 mm i tilfælde af en afbrydelse. Markér derfor denne afstand i alle retninger som en grænselinie rundt om centrifugen. Laboratorieprocedurer bør stipulere krav om, at der ikke er hverken personale eller sundhedsfarligt materiale til stede indenfor denne grænse, når centrifugen bliver betjent.

Sæt enhedens stik i en 120 VAC ± 10%, 50/60 Hz (kat. nr. 448 & 458) eller en 220/240 VAC ± 10%, 50/60 Hz (kat. nr. 448 & 458) kontakt med jordforbindelse.

BETJENING

Åbn dækslet ved at trykke den sorte låseknap opad og løfte dækslet. *Du installerer rotoren* ved at dreje den ned på akslen og trykke ned på navet i midten. Luk dækslet godt til, idet du sørger for, at låsen er rigtigt smækket. *Du starter en kørsel* ved at dreje timeren til den ønskede tidslængde for kørslen. (Til kørsler, der varer mindre end fem minutter, drej timeren forbi (5)-minuttersmærket og derefter tilbage til den kørselslængde, du ønsker.) Hvis kørslen skal vare uendelig lang tid, drej timeren hen på "∞". Det tager flere minutter, før motoren når op på tophastigheden.

Du stopper en kørsel ved enten at dreje timeren til nulmærket (0) eller ved at lade tiden løbe ud. Vent indtil den rotor har standsede i nærværelse af opslag den lukke.

SIKKERHEDSFORANSTALTNINGER

Nedenfor er anført *advarsler* mod de procedurer, som kan forårsage uheld og/eller personlige kvæstelser. Der er også en oversigt over *agtpågivenhed* overfor procedurer, som kan forårsage beskadigelse af centrifugen eller dens tilbehør.

Advarsler:

- Strømforsyningskablet skal være sat til en el-kontakt med jordforbindelse.
- Lad være nogensinde at fjerne jordforbindelsesbenet fra stikket eller at bruge en eller anden snydeprop, som annullerer eller omgår jordforbindelsesstrømkredsen.
- Du skal altid tage det elektriske kabel ud af kontakten, før du prøver på at gøre centrifugen ren eller vedligeholde den.
- Lad være at centrifugere væsker med specifik tyngdekraft større end 1,5.
- Lad være at betjene centrifugen, hvis der er tegn på, at beskyttelsesskærmene eller rotoren er blevet beskadiget. Hvis skaden er synlig, skal du øjeblikkeligt udskifte de vedrørende dele.
- Fyld rotoren SYMMETRISK med 2, 3, 4 eller 6 reagensglas i en rotor, som er beregnet til 6 pladser (IKKE 1 eller 5); eller 2, 3, 4, 6, 8, 9, 10 eller 12 reagensglas i rotoren, som er beregnet til 12 pladser (IKKE 1, 5, 7 eller 11). Reagensglassene skal være af samme størrelse, og deres indhold skal være af samme vægt (indenfor 1 gram).

Giv agt:

- Thermo IEC's Medilite er ikke beregnet eller anbefalet til brug med kemiske opløsningsmidler, som evt. kan svække vigtige dele.

  Lad være at benytte forbudte kemikalier (se tabel 1) til rengøring og/eller centrifugering.

GARANTI OG VEDLIGEHOLDELSE

Sæt dig i forbindelse med den lokale, autoriserede Thermo IEC-forhandler, når du har brug for service, eller gerne vil have oplysninger om garantien.

ΑΠΛΟΠΟΙΗΜΕΝΕΣ ΟΔΗΓΙΕΣ ΛΕΙΤΟΥΡΓΙΑΣ

ΓΕΝΙΚΑ

Το Thermo IEC Medilite ειναι μια φορητη φυγοκεντρος που τοποθετειται πανω σε τραπεζι και εχει σχεδιαστει για να χρησιμοποιειται σε Ιατρικα γραφεια, κλινικα εργαστηρια και στον εκπαιδευτικο τομεα, για να χωριζει με φυγοκεντρικη δυναμη, και οχι για κανενα αλλο σκοπο.

Σημειωση: Τυπικες εκπομπες ηχου δεν υπερβαινουν τα 70 dB(A).

ΕΓΚΑΤΑΣΤΑΣΗ

Το μερος που θα τοποθετηθει η φυγοκεντρος πρεπει να ειναι καθαρο και στεγνο για να γινει σωστη εγκαταταση στο ποτηρι απορροφησης και για να ειναι ασφαλης η φυγοκεντρος. Το μερος που θα τοποθετηθει πρεπει να ειναι επιπεδο και στερεο για να δημιουργησει ησυχη και ελευθερη απο κραδασμους λειτουργια. Η διαταξη 1010 τμημα 2-20 Διεθνους Ηλεκτροτεχνικης Επιτροπης περιοριζει την επιτρεπομενη μετακινηση της φυγοκεντρου μεχρι 300 mm σε περιπτωση διακοπης. Για τον λογο αυτο τραβηχτε ενα περιθωριο για πλαισιο κενου χωρου γυρω απο την κεντροφυγο. Εργαστηριακες διαδικασιες απαιτουν ωοτε κανενα ατομο η επικινδυνα υλικα να βρισκονται μεσα σε αυτο το πλαισιο οταν λειτουργει η φυγοκεντρος.

Συνδεστε τη συσκευη σε μπριζα με ρευμα 120 VAC ± 10%, 50/60 Hz (κατηγοριες No. 448 & 458) η ρευμα 220/240 VAC ± 10%, 50/60 Hz (κατηγοριες No. 449 & 458) που θα εχει γειωση.

ΛΕΙΤΟΥΡΓΙΑ

Για να ανοιξετε το καλυμα, σπρωχτε το κουμπι (μανδαλο) προς τα επανω και σηκωστε το καλυμα. Ο περιστροφεας τοποθετειται κατευθυνοντας τον προς τον στροφαλο πιεζοντας τον προς τα κατω στη μεση (ομφαλο). Κλειστε καλα το καλυμα και βεβαιωθειτε οτι το μανδαλο εχει πιασει πληρως. Για να το κανετε να γυρισει γυριστε το χρονοδιακοπτη στον επιθυμητο χρονο λειτουργιας. (Για λειτουργιες κατω απο πεντε λεπτα, γυριστε τον χρονοδιακοπτη να περασει τα πεντε (5) λεπτα και μετα επιστρεψτε στον επιθυμητο χρονο). Για λειτουργια με απεριοριστο χρονο γυριστε τον χρονοδιακοπτη στη θεση '∞'. Ο κινητηρας θα κανει μερικα δευτερολεπτα να πιασει την ανωτατη ταχυτητα.

Το γυρισμα σταματα ειτα γυριζοντας τον χρονοδιακοπτη στην θεση μηδεν (0) η αφηνοντας να εκπνευσει ο χρονος. περιμενω μεχρι τον περιστροφεα εχει σταματω πριν ανοιγμα καλυμα.

ΜΕΤΡΑ ΑΣΦΑΛΕΙΑΣ

Ακολουθουν κατωτερω ΠΡΟΕΙΔΟΠΟΙΗΣΕΙΣ σχετικα με χειρισμους που μπορουν να προκαλεσουν ατυχημα η και τραυματισμο. Παρατιθενται επισης ΠΡΟΦΥΛΑΚΤΙΚΑ ΜΕΤΡΑ για χειρισμους που μπορουν να προκαλεσουν ζημια στην κεντροφυγο η τα βοηθητικα μηχανηματα.

ΠΡΟΦΥΛΑΚΤΙΚΑ ΜΕΤΡΑ

- Βαλτε το καλωδιο σε γειωμενη μπριζα.
- ΜΗΝ μετακινησετε ποτε τον πολο γειωσεως απο την μπριζα, και μην χρησιμοποιητε προσαρμοστη (μετασχηματιστη) που δεν εχει γειωση.
- Να βγαζετε το καλωδιο παντα απο την μπριζα πριν το καθαρισετε η κανετε συντηρηση στην φυγοκεντρο.
- Μην λειτουργησετε την κεντροφυγο αν ο προφυλακτηρας η ο περιστροφεας ειναι χαλασμενος. Αν η φθορα ειναι ορατη αντικαταστηστε τα χαλασμενα κομματια αμεσως.
- Φορτωστε τον περιστροφεα ΣΥΜΕΤΡΙΚΑ με 2, 3, 4, η 6 σωληνακια στον εκτο περιστροφεα (ΟΧΙ 1 η 5); η 2, 3, 4, 6, 8, 9, 10, η 12 σωληνακια στον δωδεκατο περιστροφεα (ΟΧΙ 1, 5, 7, η 11). Τα σωληνακια πρεπει να εχουν ιδιο μεγεθος και χωριτηκοτητα ιδιου βαρος (1 γραμ).

ΠΡΟΕΙΔΟΠΟΙΗΣΕΙΣ

- Το Thermo IEC Medilite δεν ειναι προωρισμενο η κατασκευασμενο ωστε να χρησιμοποιουνται χημικα διαλυτικα τα οποια μπορουν να αποδυναμωσουν βασικα κομματια. Αποφευγετε να χρισημοποιειτε απαγορευμενα χημικα (δειτε πινακα 1) για καθαρισμο και/η φογοκεντρισμο.

ΕΓΓΥΗΣΗ & ΣΥΝΤΗΡΗΣΗ

Πληροφοριες για εγγυηση η συμβαση συντηρησης επικοινωνηστε με τον εξουσιοδοτημενο Thermo IEC αντιπροσωπο.

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IMPORTANT

This manual may not contain information on all changes that have occurred to the subject instrument since the manual issue date. It was prepared for use by Thermo IEC authorized factory-trained personnel who are kept current through a program of service letters, bulletins and training seminars.

This manual contains *warnings* against operating procedures that could result in an accident and/or personal injury. It also contains *cautions* against procedures that could result in damage to your centrifuge or accessories. Read this manual thoroughly before operating or servicing this centrifuge.

1 INTRODUCTION

The Thermo IEC Medilite is a portable centrifuge designed for use in the physician's office, the small clinical laboratory and the classroom.

The unit consists of:

- A baseplate with three rubber suction cup pads for stability.
- A brushless AC motor is attached to the cabinet. The motor is thermally protected at 100°C in accordance with UL specifications
- A six or twelve place plastic 45° angle rotor
- A 30 minute timer (with hold function)
- A viewport in the cover for easy speed verification

2 INSTALLATION

The unit requires minimal assembly before use.

1. After unpacking, place the unit on a clean, level surface. The surface must be level to ensure quiet, vibration-free operation. A rigid, stable location is important because an improperly loaded unit can vibrate or move.

2. Lift the lever to release the latch. Remove the soft material covering the plastic shields (6 or 12) that are shipped in position inside the rotor.

3. Press down on the center hub to ensure that the rotor is secured to the shaft. Turn rotor by hand to verify it turns freely.

4. Inspect the shields for damage. Make sure the flange of the shield is flush with the surface of the rotor.

5. Plug the unit into a 120 VAC +/-10%, 50/60 Hz (Cat. Nos. 448 and 458) or a 220/240 VAC +/- 10%, 50/60 Hz (Cat. Nos. 449 and 459).

3 OPERATION

3.1 Warnings and Cautions

Warnings

- Plug the power cord into a grounded outlet.
- Never remove the grounding prong from the power plug or use any adapter that does not complete the grounding circuit.
- Always unplug the power cord before attempting to clean or service the unit.
- Do not spin any fluids which have a specific gravity greater than 1.5.
- Do not operate the unit if the shields or rotor show signs of damage. If deterioration is visible, replace the affected parts immediately.
- Do not open the lid while the unit is spinning.

Note: Chemical damage can appear as crazing, frosting, peeling or similar deterioration of the inner cavity or exterior surface of the shields or rotor. Mechanical damage can appear as cracks, scratches or gouges on the shield or rotor surfaces.

Cautions

- The Thermo IEC Medilite is not intended or recommended for use with chemical solvents that may weaken critical parts. Refrain from using prohibited chemicals (see table 1) for cleaning or centrifugation.

Table 1: Prohibited chemicals

Concentrated Mineral acids (e.g. Hydrochloric, Sulfuric, Nitric acid, etc.) should not be allowed to come into contact with the base assembly, rotor or shields of this centrifuge. These and other parts of the Medilite are not adversely affected by short-term exposure to other acids or solvents, hydrocarbons, alkalies or gases. Good Laboratory Practices for cleaning should be followed and any part of the centrifuge exposed to strong chemicals should be thoroughly cleaned as soon as is practical.

3.2 Loading

Unlatch and open the cover. Check that the rotor turns freely and that there are no loose objects in the chamber.

Load the rotor symmetrically with 2,3,4 or 6 tubes in the 6-place rotor (but not 1 or 5) or 2,3,4,6,8,9 or 12 in the 12-place rotor (but not 1, 5, 7 or 11).

The tubes must be of equal size and with contents of equal (within 1 gram) weight. Close the cover securely, ensuring that the latch is engaged.

3.3 Starting a Run

Turn the timer knob to the desired run duration (for runs of under 5 minutes, turn the timer past the five minute setting and then back to the desired time). For runs in the HOLD mode (infinite duration), turn the knob speed to the ∞ setting. The motor will take several minutes to reach top speed.

Note: periods of slight vibration during acceleration are normal.

If excessive vibration occurs, turn the timer knob to zero (0). When the rotor has come to a stop, open the cover and check that the load is balanced. If the rotor is properly balanced and vibration persists, ensure that the suction cup feet are clean and adhering to the surface on which the unit was placed.

3.4 Stopping a Run

To stop a run, turn the timer knob to zero or allow the time to expire. Wait until the rotor has come to a complete stop, then unlatch and open the cover.

4 MAINTENANCE

4.1 Cleaning

This section describes the proper method for cleaning your centrifuge. **Always unplug the unit before cleaning.**

1. Release the latch, open the cover and unplug the unit.

2. Check the chamber for spills or broken glass. If present, wipe out the chamber with a water-dampened sponge.

Note: If glass breakage is an on-going condition, we recommend that all the plastic shields be replaced. Microscopic particles of glass become embedded in the plastic shields. These particles can come in contact with new glass tubes, creating a pressure point that may result in recurring tube breakage.

3. Clean the outside of the unit, the rotor and the chamber with warm water, mild detergent and a sponge.

Note: To remove the rotor, lift it straight up off its drive shaft. The rotor is held in place by spring clips that line up flat to the surface on the drive shaft. To reinstall the rotor, line up the clips with the flat surface and press it as far down the shaft as it will go.

Warning: Never use any of the chemicals listed in Table 1 for cleaning. Never use a cleaner that contains abrasives. Check your cleaner to be sure none of its ingredients will damage the unit.

4.2 Fuse Change

To change the internal fuse(s), open the cover and remove the rotor and shields. Close the cover. Unplug the centrifuge, carefully place the machine on its cover and remove the baseplate (four bolts - 1/4 inch socket). The fuses have the following values:

For 120 VAC (Cat. No. 448 & 458) - one 2.5A Slo-Blo part number 65767
For 240 VAC (Cat. No. 449 & 459) - two 1.25A Slo-Blo part number 42517

5 SERVICE

5.1 Troubleshooting

If the unit will not start, check the following in order to isolate the problem:

- Check the fuse by removing the base of the unit.
- Check the resistance across the coils of the relay, which is approximately 3.5 kΩ.
- Check the latch microswitch and the proximity switch.

There are two switches in the unit. One is the latch switch and the other is the proximity switch. Both are in series with the relay and must be 'closed' in order for the unit to operate.

To access the components, unplug the centrifuge, open the cover, and remove the rotor. Carefully place the unit upside down on its cover and remove the four bolts (1/4 inch socket) which secure the baseplate. Lift the baseplate off.

5.2 Latch Assembly

The latch assembly consists of a catch, a striker, a microswitch, and a proximity switch. When the cover is closed, the cover striker engages the microswitch, which senses the status of the cover (open, closed/locked). The proximity switch also senses the position of the cover for the purpose of disabling a run unless the cover is fully closed. The proximity switch magnet is located in the cover and causes the switch located in the cabinet to actuate.

To remove the latch switch, remove the two Phillips head screws at the front plate of the unit. Note the wiring to the switch and disconnect.

5.3 Timer/ Relay

The Thermo IEC Medilite has a built-in 30-minute mechanical timer. It also has a hold mode for indefinite time runs. The timer acts as a switch delivering power to the motor. To replace it, the knob must be removed. The knob is pressed onto the timer shaft and may require pliers to remove. The timer is secured to the base with a nut.

When the timer is set, the timer, through the relay, delivers 120VAC to the motor. This can verified using a voltmeter measuring across the two black leads coming out of the timer.

5.4 Motor

The Thermo IEC Medilite uses a brushless induction drive motor. It requires no maintenance. The speed of the motor is approximately 3100 rpm (60 Hz) or 2700 rpm (50 Hz). This can be verified using an optical tachometer through the viewport in the cover. (Note: Less than nominal line voltage will affect the centrifuge's top speed.)

When isolated, the motor resistance should be approximately 12 Ω. To replace the motor, remove the four nuts, which secure it to the base. Disconnect the wiring harnesses of the motor to the relay.

6 SPECIFICATIONS

Specification	Cat Nos. 448&458 (120 V)	Cat Nos. 449&459 (240 V)
Maximum Speed	3100 RPM	2700 RPM
Maximum RCF	1228xg	920xg
Tubes Size (mm) O.D. x Length Min	7x100	same
O.D. x Length Maximum 6 tubes (in 6 or 12 place)	16x133 or 17x120	same
O.D. x Length Maximum 12 tubes	16x100	same
Maximum Volume		
6 place	90 mL (6x15mL)	same
12 place	120 mL (12x10 mL)	same
Centrifuge Motor	.022 hp	same
Power Requirement	120 VAC ±10% 50/60 Hz, 2A	220/240 VAC ±10% 50/60 Hz, 1A
Height		
Cover Closed:	9.5” (24.1 cm)	same
Cover Opened:	18” (45.7 cm)	same
Width	11.5” (29.2 cm)	same
Depth	14.75” (37.5 cm)	same
Net Weight	9.5 Lbs (4.3 Kg)	same
Shipping Weight	12.5 Lbs. (5.7 Kg)	same

Specifications are subject to change without notice.

7 DRAWINGS

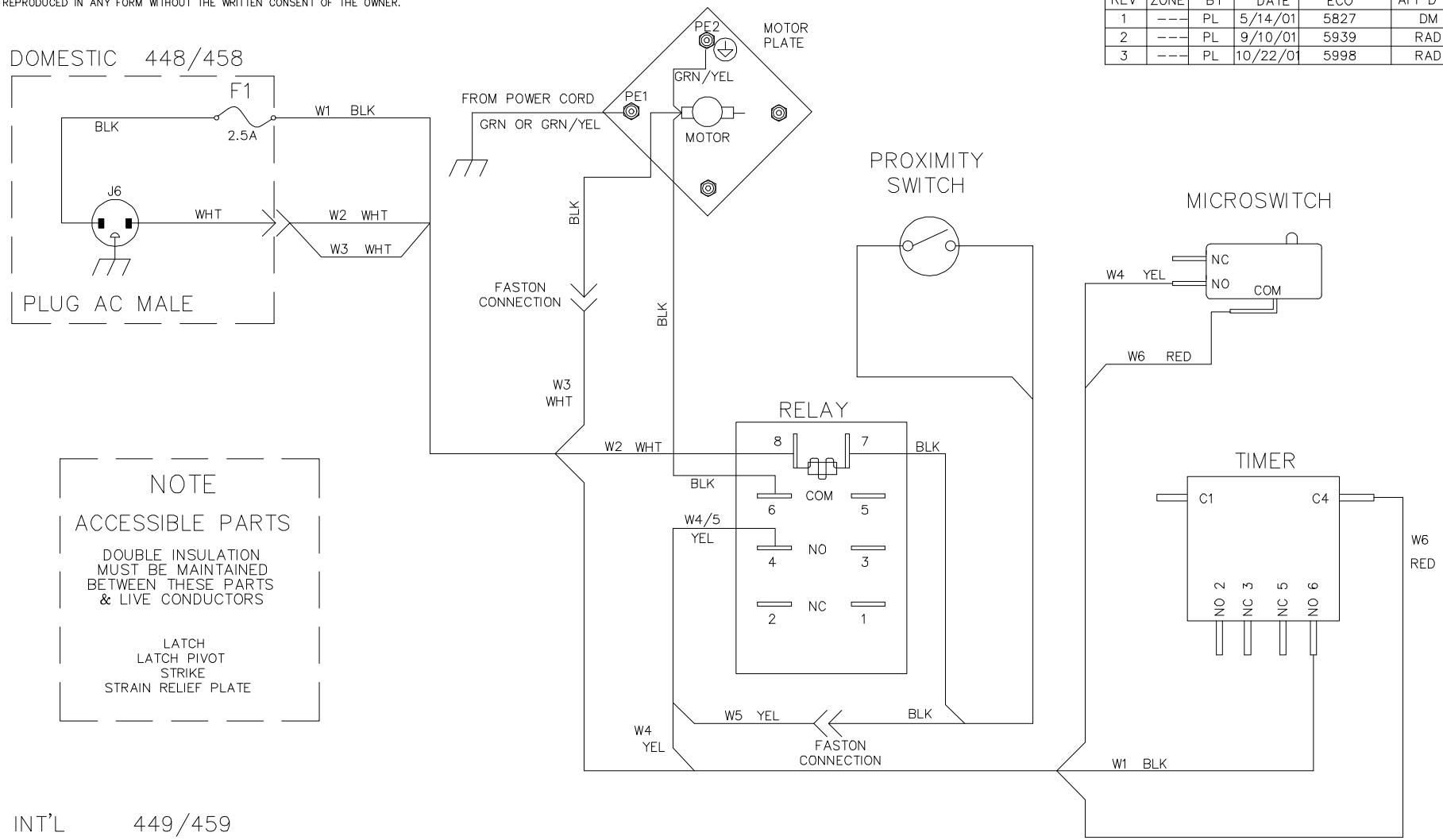
Drawings included in this section:

11006	System Schematic
448	Medilite Assembly
PL448	Medilite Parts List

Note: At time of publication, these drawings were accurate. Changes do occur. If you have any questions regarding these drawings, contact Thermo IEC at +(781) 449-8060, or your local dealer.

THIS DRAWING IS CONFIDENTIAL, THE PROPERTY OF ThermoIEC, AND MAY NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF THE OWNER.

REVISIONS						
REV	ZONE	BY	DATE	ECO	APP'D	DATE
1	---	PL	5/14/01	5827	DM	5/9/01
2	---	PL	9/10/01	5939	RAD	9/10/01
3	---	PL	10/22/01	5998	RAD	11/7/01



		MATERIAL:	PARTS LIST. SEE PL:
			INTERNATIONAL EQUIPMENT CO.
		FINISH:	TITLE: SYSTEM SCHEMATIC MEDILITE
	458,459	UNLESS OTHERWISE SPECIFIED:	
	448,449	DIMENSIONS ARE IN INCHS.	
NEXT ASSY	USED ON	DIMENSIONS ARE AFTER FINISH.	
APPLICATION		REMOVE ALL BURRS & SHARP EDGES.	
	BY / DATE	SURFACE QUALITY ✓	SIZE: C / CODE ID. NO. / DRAWING NO. 11006 / REV. 3
DRAWN	PL 5/14/01	TOLERANCES: 2 PLACE DEC. ± .02; 3 PLACE DEC. ±.005; ANGLES ±1/2	SCALE: 1=1 / SHEET 1 OF 1
CHECKED	HJR 5/19/01		
APPROVED	RAD 5/19/01		

Tel.: +(781)449-8060 Fax: +(781)455-9749

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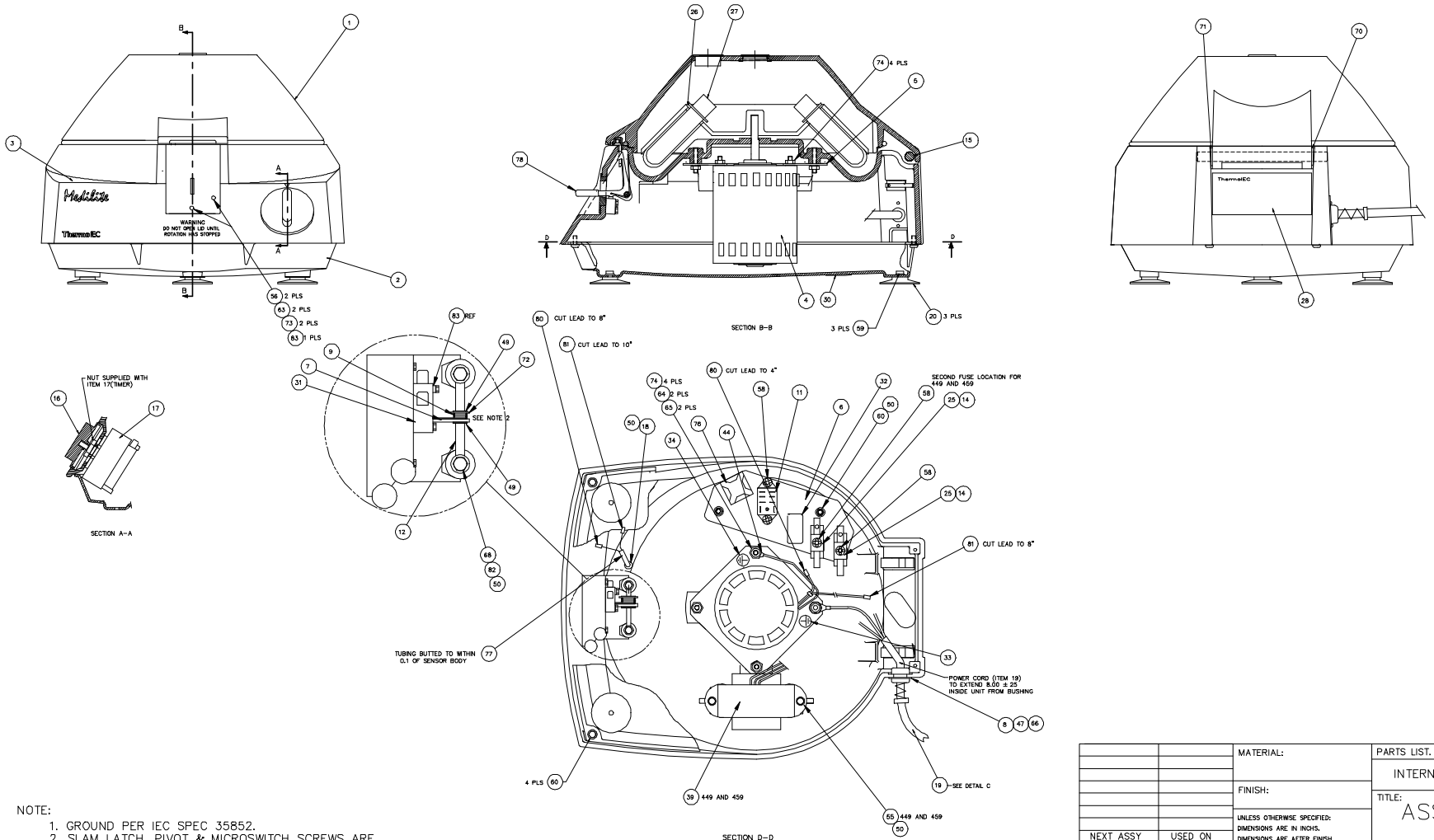
REVISIONS						
REV	ZONE	BY	DATE	ECO	APP'D	DATE
0	–	PL	4/27/00	5382	RAD	1/26/01
1	---	pl	2/12/01	5708	RAD	2/2/01
2	---	PL	5/9/01	5830	RAD	5/14/01
3	---	PL	10/22/01	5998	RAD	11/7/01
4	---	PL	11/16/01	6027		



NOTE:

1. GROUND PER IEC SPEC 35852.
2. SLAM LATCH, PIVOT & MICROSWITCH SCREWS ARE DOUBLE INSULATED. ANY CHANGES TO WIRING OR HARDWARE IN THIS AREA REQUIRES REGULATORY REVIEW.
3. REFER TO MPS FOR WIRING HARNESS ROUTING.

NEXT ASSY	USED ON		
APPLICATION			
	BY	DATE	
DRAWN	PL	4/27/00	
CHECKED	HJR	5/19/01	
APPROVED	RAD	5/19/01	

MATERIAL:

FINISH:

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHS.
DIMENSIONS ARE AFTER FINISH.
REMOVE ALL BURRS & SHARP EDGES.
SURFACE QUALITY ✓

TOLERANCES: 2 PLACE DEC. ± .02 | 3 PLACE DEC. ±.005 | ANGLES ±1/2

PARTS LIST. SEE PL: SHEET 2

INTERNATIONAL EQUIPMENT CO.

TITLE: ASSY MEDILITE

SIZE:	CODE ID. NO.	DRAWING NO.	REV.
D		448	4

SCALE: 1=2 SHEET 1 OF 2

Tel.: +(781)449-8060 Fax: +(781)455-9749

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REVISIONS						
REV	ZONE	BY	DATE	ECO	APP'D	DATE

ASSY MEDILITE

1	1	C-65752	ASSY LID	
2	1	D-50326	COVER, BOTTOM	
3	1	D-65770	HOUSING	
4	1	D-50339	MOTOR	
5	1	C-50333	PLATE, MOTOR MTG.	
6	1	C-65761	BRACKET, RELAY	
7	1	B-65755	SLAM LATCH	
8	1	B-44073	MTG. PLATE STRAIN RELIEF	
9	1	B-50151	SPRING, LATCH	
10				
11	1	B-61058	RELAY DPDT	
12	1	65757	PIN, LATCH PIVOT	
13				
14				
15	1	A-50338	PIN, HINGE	
16	1	C-50342	KNOB, TIMER	
17	1	C-50346	TIMER & NUT	
18	1	B-65760	SWITCH PROXIMITY	
19				
20	3	50148	SUCTION FOOT	
21				
22				
23				
24				
25				
26				
27				
28				
29	1	65771	WIRING HARNESS	NOT SHOWN
30	1	B-45996	LABEL, WARNING	
31	1	65763	SWITCH, LATCH ARM	
32				
33	1	50127	LABEL PROTECTION EARTH GROUND SYMBOL	
34	4	50128	LABEL PROTECTION CHASSIS GROUND SYMBOL	
35				
36	1	IM-448	INSTRUCTION MANUAL	
37	REF	11006	SCHEMATIC DIAGRAM	NOT SHOWN
38				
39				
40				
41				
42				
43				
44	1	COML	TERM., RING #8	REF IEC DWG 74006-J
45				
46				
47	2	COML	POP RIVET	SSD-44-SSBS
48				
49	2	H855600	TRUARC RING	#5133-18
50	AR	COML	ADHESIVE	LOCTITE#242
55				
56	2	H114201	SCREW PAN HD PHIL 4-40UNC X 1.00 LG	BLACK OXIDE
57				
58				
59	3	H103124	SCREW HEX HD 5/16-18 X .50 LG	SST
60	6	H183317	SCREW WHIZ-LOCK 8-32UNC X .25 LG	ST-CAD
63	2	H424011	WASHER LOCK INT TOOTH #4	SST
64	4	H424103	WASHER LOCK INT TOOTH #8	SST
65	4	H425101	WASHER LOCK EXT TOOTH #8	ST-CAD
66	2	H401116	WASHER FLAT #4	SST
67				
68	2	H401112	WASHER FLAT #10 TYPE B	
70	1	H401909	WASHER FLAT .81 OP.D. X .4 I.D. X .07 THK	NYLON-WHITE 1060
71	1	H401809	WASHER FLAT .75 O.D. X .5 I.D. X .04 THK	NYLON WHITE 1060
72	1	H401003	WASHER NYLON .375 O.D. X .194 I.D. X .032TH	ASMCO #166-030-N-1
73	2	H303101	NUT HEX 4-40	SST
74	8	H300080	NUT ESNA 8-32	
75				
76	1	COML	TY-WRAP ANCHOR	A3M2S-A-D
77	7.25"	COML	TUBING INS. HEAT SHRINK	
78	1	COML	GRAY VINYL CAP	.187 DIA X 1.0 LG
79				
80	2	COML	TERM. FASTON TAB .187 X .020	REF IEC DWG 74003-AC
81	2	COML	TERM., FASTON INS. .187 X .020 (22-18)	REF IEC DWG 74003-J
82	2	H183307	SCREW WHIZ-LOCK 10-32UNC X .50 LG	ST-CAD
83	1	H401804	WASHER FLAT NYLON #4	

ASSY MEDILITE 120V 50/60HZ 6 PLS — CAT NO 448

14	1	65767	FUSE 2.5A	
19	1	65772	POWER CORD	
25	1	55108	FUSE HOLDER	
26	1	D-47430	ROTOR	
27	6	B-46606	SHIELD	
28	1	COML	DATA PLATE	REF IEC DWG66001AH
32	1	40346-F	FUSE LABEL	
55				
58	3	H110127	SCREW PAN HD 6-32UNC X .38 LG	SST

ASSY MEDILITE 120V 50/60HZ 12 PLS — CAT NO 458

14	1	65767	FUSE 2.5A	
19	1	65772	POWER CORD	
25	1	55108	FUSE HOLDER	
26	1	D-47620	ROTOR	
27	12	B-46606	SHIELD	
28	1	COML	DATA PLATE	REF IEC DWG66001AJ
32	1	40346-F	FUSE LABEL	
55				
58	3	H110127	SCREW PAN HD 6-32UNC X .38 LG	SST

ASSY MEDILITE 240V 50/60HZ 6 PLS — CAT NO 449

14	2	42517	FUSE 1.25A	
19	1	44392	POWER CORD W/HEYCO FLEX STRAIN RELIEF	
25	2	55108	FUSE HOLDER	
26	1	D-47430	ROTOR	
27	6	B-46606	SHIELD	
28	1	COML	DATA PLATE	REF IEC DWG66003BX
32	1	40346-B	FUSE LABEL	
39	1	61274	TRANSFORMER	
55	2	H183318	SCREW WHIZ-LOCK 8-32UNC X .38 LG	
58	4	H110127	SCREW PAN HD 6-32UNC X .38 LG	SST

ASSY MEDILITE 240V 50/60HZ 12 PLS — CAT NO 459

14	2	42517	FUSE 1.25A	
19	1	44392	POWER CORD W/HEYCO FLEX STRAIN RELIEF	
25	2	55108	FUSE HOLDER	
26	1	D-47620	ROTOR	
27	12	B-46606	SHIELD	
28	1	COML	DATA PLATE	REF IEC DWG66003BY
32	1	40346-B	FUSE LABEL	
39	1	61274	TRANSFORMER	
55	2	H183318	SCREW WHIZ-LOCK 8-32UNC X .38 LG	
58	4	H110127	SCREW PAN HD 6-32UNC X .38 LG	SST

NEXT ASSY	USED ON	
APPLICATION		
	BY	DATE
DRAWN		
CHECKED		
APPROVED		

MATERIAL:

FINISH:

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES.
DIMENSIONS ARE AFTER FINISH
REMOVE ALL BURRS & SHARP EDGES.
SURFACE QUALITY ✓

TOLERANCES
2 PLACE DEC. ±.02 | 3 PLACE DEC. ±.005 | ANGLES ±1/2

PARTS LIST. SEE PL:

INTERNATIONAL EQUIPMENT CO.

TITLE: ASSY MEDILITE

SIZE:	CODE ID. NO.	DRAWING NO.	REV.
D		448	4

SCALE: | SHEET 2 OF 2